BCW

...ID - ENVIRONMENTAL HEALTH DIVISION

Statesville Office (704) 878-5305 | Mooresville Office (704) 660-3625 | PERMIT # 312747

SEPTIC: IMPROVEMENT PERMIT / AUTHORIZATION TO CONSTRUCT / OPERATION PERMIT / EXISTING SYSTEM

PIN # 4638-01-2951

APPLICANT/OWNER: Todd & Wendie Dunn | APPLICANT ADDRESS: 18028 Delmas Dr Cornelius 28031

SITE ADDRESS: 231 Hermance LN Mooresville NC | PHONE: 801-608-3384 | ALT. PHONE Same

SITE DIRECTIONS: Hwy 150 to Waddle Road take 1st R on Hermance .25 mi. lot on L | SAP CONTROLLED: ☐ YES ☒ NO

SUBDIVISION: Fishermans Cove | SECTION: | LOT # 4 | LOT AREA: .76 Acre | DESIGN FLOW: 360gpd | L.T.A.R.: .35

Septic Tank	1000 (gal)	STB	Date	☒ New System	☐ Repair	☐ Expansion	System Type: I II (III) IV V VI	☒ Residence	No. Bedrooms 3
Pump Tank	(gal)	PT	Date	System Description: PPBPS				☐ Business	No. Persons 6
Pump Make		Model	Serial #	Repair System Description: Drip				☐ Other	No. Employees
# Nitrification Fields	1	# Lines 6	Linear Ft 120'	Maintenance Agreement Required:	☐ YES	☒ NO		☐ Slab	☐ Crawl Space
Trench Width	24"	Trench Bottom Depth(Low side)	42"	Gravel Depth -	☒ GRAVITY	☐ PRESSURE		☒ Basement w/plumbing	☐ Basement w/o plumbing

Water Supply: ☒ Private ☐ Public ☐ Community

Comments / Conditions: Install Drainlines on contour of land
Use P Box for distribution.

INITIAL SITE SKETCH

This permit is issued pursuant to Section 11 . (C) of S.L. 2018-114 using the signed and sealed LSS Evaluation by:

Steven Melin

LSS # 1254

AS BUILT SKETCH

FOR SEPTIC FINAL INSPECTION CALL: 704-664-3703 between 8am-9am the day the inspection is needed. Be sure to speak with an inspector to confirm your time.

✓ – Need drainage along property line to divert off septic

✓ – Must move porch posts to 5' off system

✓ – remove fill/runoff from repair area.

– corrected 3/15/23

tanks, lines 2/23/23 DW

Permit can be suspended or revoked if any false information is supplied toward securing the permit / any unauthorized changes are made to the site / any unauthorized changes are made in the installation of the system. **CONTACT A LOCATOR SERVICE PRIOR TO ANY EXCAVATION**

☐ **IMPROVEMENT PERMIT** *with plat valid without expiration.* ☑ **IMPROVEMENT PERMIT** *with site plan valid for 60 mos.* ☑ **AUTHORIZATION TO CONSTRUCT** *valid for period equal to IMPROVEMENT PERMIT--not to exceed 60 mo.*

Owner / Applicant Signature: See attached | Date: | Installed by: Specialty Septic

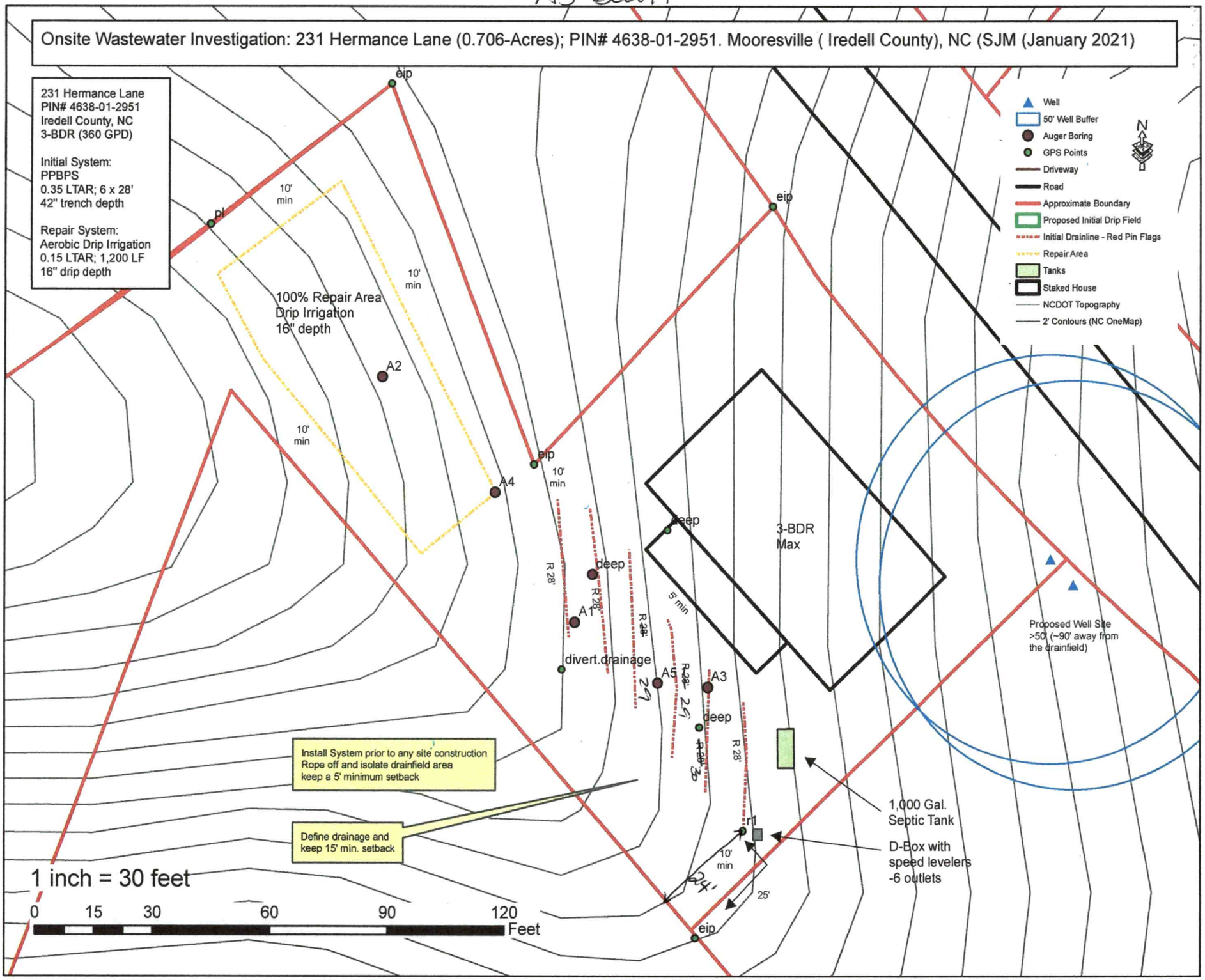
IMPROVEMENT PERMIT by: | Date: 2-17-2021 | OPERATION PERMIT by: D. Tucker | Date: 3/15/23

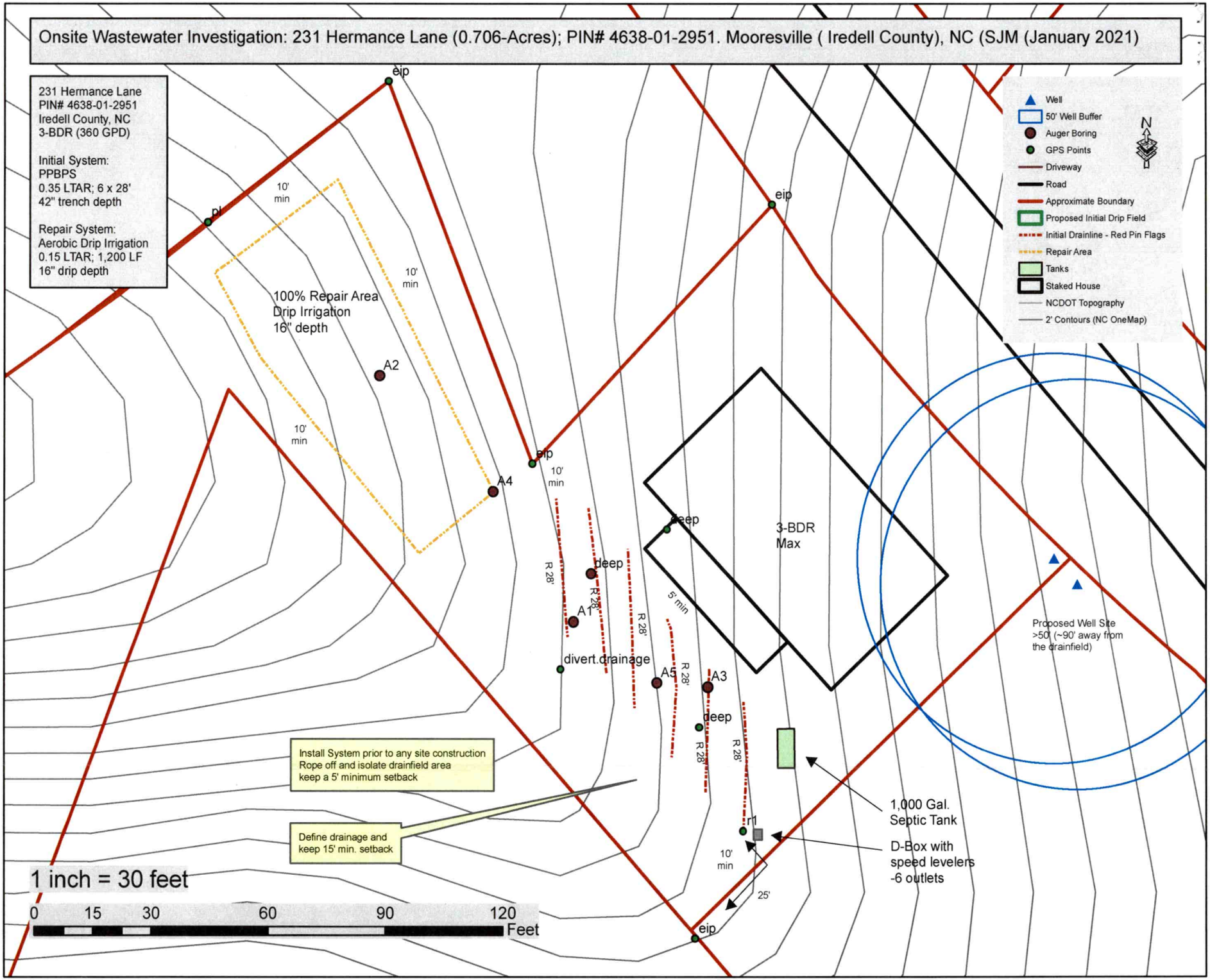
AUTHORIZATION TO CONSTRUCT by: | Date: 2-17-2021 | Existing System Inspected by: | Date:

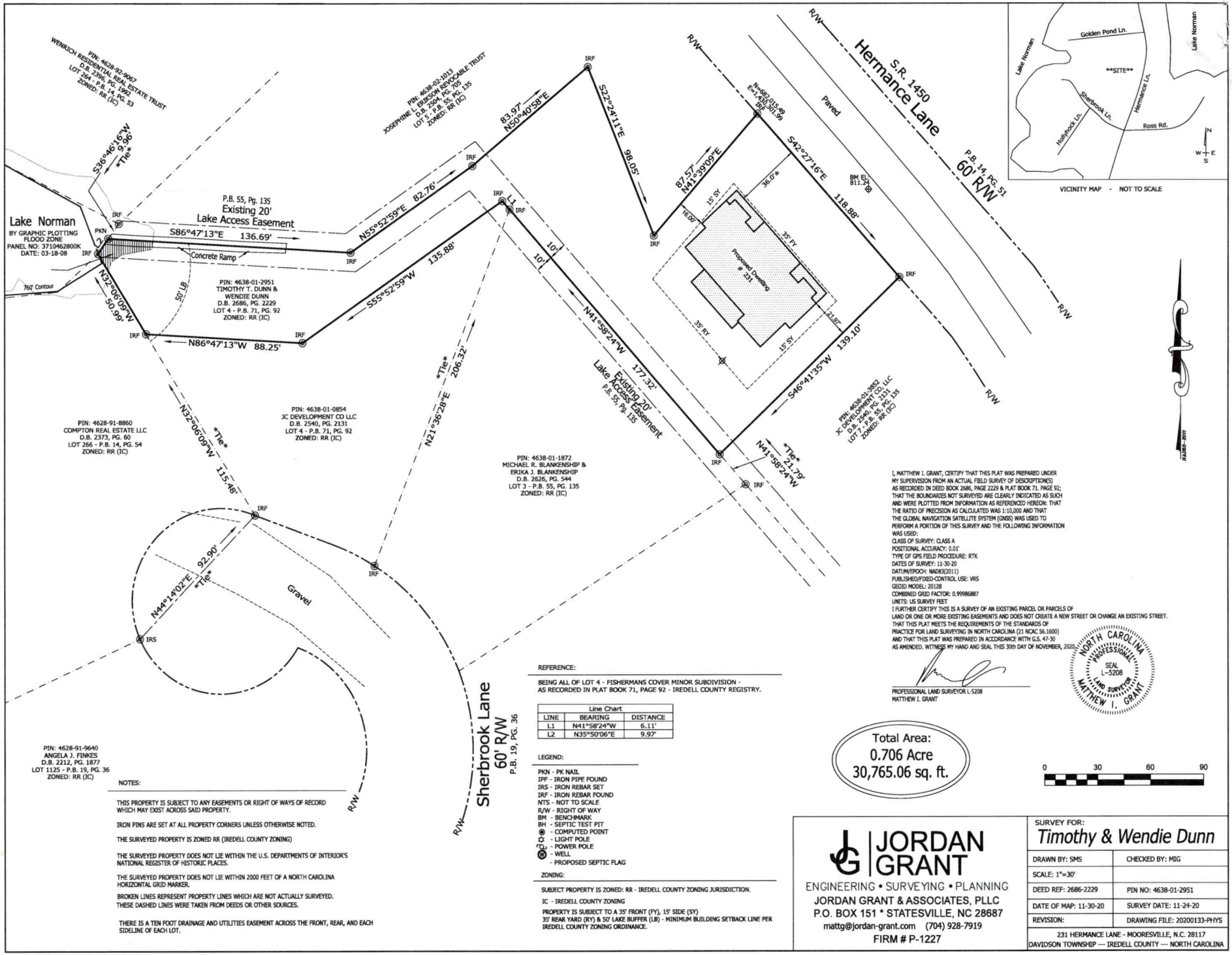
FOR SEPTIC FINAL INSPECTION: CALL 704-664-3703 between 8am-9am the day the inspection is needed.

As Built

Onsite Wastewater Investigation: 231 Hermance Lane (0.706-Acres); PIN# 4638-01-2951. Mooresville (Iredell County), NC (SJM (January 2021)




Onsite Wastewater Investigation: 231 Hermance Lane (0.706-Acres); PIN# 4638-01-2951. Mooresville (Iredell County), NC (SJM (January 2021)
231 Hermance Lane
PIN# 4638-01-2951
Iredell County, NC
3-BDR (360 GPD)
Initial System:
PPBPS
0.35 LTAR; 6 x 28'
42" trench depth
Repair System:
Aerobic Drip Irrigation
0.15 LTAR; 1,200 LF
16" drip depth
Well
50' Well Buffer
Auger Boring
GPS Points
Driveway
Road
Approximate Boundary
Proposed Initial Drip Field
Initial Drainline - Red Pin Flags
Repair Area
Tanks
Staked House
NCDOT Topography
2' Contours (NC OneMap)
N
eip
pl
10' min
100% Repair Area
Drip Irrigation
16" depth
A2
A4
A1
A5
A3
deep
R 28'
5' min
3-BDR
Max
divert.drainage
Proposed Well Site
>50' (~90' away from
the drainfield)
Install System prior to any site construction
Rope off and isolate drainfield area
keep a 5' minimum setback
Define drainage and
keep 15' min. setback
1,000 Gal.
Septic Tank
D-Box with
speed levelers
-6 outlets
r1
25'
1 inch = 30 feet
0
15
30
60
90
120
Feet


PIN: 4638-92-2067
WENRICH RESIDENTIAL REAL ESTATE TRUST
D.B. 2396, PG. 1982
LOT 264 - P.B. 14, PG. 53
ZONED: RR (IC)
PIN: 4638-02-1013
JOSEPHINE L. ERICKSON REVOCABLE TRUST
D.B. 3504, PG. 705
D.B. 5 - P.B. 55, PG. 135
LOT 5 - P.B. 55, PG. 135
ZONED: RR (IC)
R/W
Hermance Lane
S.R. 1450
P.B. 14, PG. 51
60' R/W
Paved
VICINITY MAP - NOT TO SCALE
Golden Pond Ln.
Lake Norman
SITE
Sherbrook Ln.
Hermance Ln.
Hollyhock Ln.
Ross Rd.
Lake Norman
BY GRAPHIC PLOTTING
FLOOD ZONE
PANEL NO: 3710462800K
DATE: 03-18-08
760' Contour
P.B. 55, Pg. 135
Existing 20'
Lake Access Easement
S86°47'13"E 136.69'
Concrete Ramp
N55°52'59"E 82.76'
S36°46'16"W 9.98'
Tie
N32°06'09"W 50.99'
50' LB
PIN: 4638-01-2951
TIMOTHY T. DUNN &
WENDIE DUNN
D.B. 2686, PG. 2229
LOT 4 - P.B. 71, PG. 92
ZONED: RR (IC)
S55°52'59"W 135.88'
N86°47'13"W 88.25'
PIN: 4628-91-8860
COMPTON REAL ESTATE LLC
D.B. 2373, PG. 60
LOT 266 - P.B. 14, PG. 54
ZONED: RR (IC)
N32°06'09"W *Tie* 115.48'
PIN: 4638-01-0854
JC DEVELOPMENT CO LLC
D.B. 2540, PG. 2131
LOT 4 - P.B. 71, PG. 92
ZONED: RR (IC)
N21°36'28"E *Tie* 206.32'
PIN: 4638-01-1872
MICHAEL R. BLANKENSHIP &
ERIKA J. BLANKENSHIP
D.B. 2626, PG. 544
LOT 3 - P.B. 55, PG. 135
ZONED: RR (IC)
N50°40'58"E 83.97'
S22°24'11"E 98.05'
N41°58'24"W 177.32'
Lake Access Easement
P.B. 55, Pg. 135
10'
10'
N41°58'24"W *Tie* 21.79'
N=682,015.49
E=1,470,891.99
S42°27'16"E 118.88'
87.57'
R41°39'09"E
BM EL
811.24
36.0'*
15' SY
16.00'
35' FY
Proposed Dwelling
231
35' RY
15' SY
21.87'
S46°41'35"W 139.10'
PIN: 4638-01-3852
JC DEVELOPMENT CO, LLC
D.B. 2540, PG. 2131
LOT 7 - P.B. 55, PG. 135
ZONED: RR (IC)
PIN: 4628-91-9640
ANGELA J. FINKES
D.B. 2212, PG. 1877
LOT 1125 - P.B. 19, PG. 36
ZONED: RR (IC)
N44°14'02"E 92.90'
Tie
Gravel
Sherbrook Lane
60' R/W
P.B. 19, PG. 36
R/W
R/W
NOTES:
THIS PROPERTY IS SUBJECT TO ANY EASEMENTS OR RIGHT OF WAYS OF RECORD WHICH MAY EXIST ACROSS SAID PROPERTY.
IRON PINS ARE SET AT ALL PROPERTY CORNERS UNLESS OTHERWISE NOTED.
THE SURVEYED PROPERTY IS ZONED RR (IREDELL COUNTY ZONING)
THE SURVEYED PROPERTY DOES NOT LIE WITHIN THE U.S. DEPARTMENTS OF INTERIOR'S NATIONAL REGISTER OF HISTORIC PLACES.
THE SURVEYED PROPERTY DOES NOT LIE WITHIN 2000 FEET OF A NORTH CAROLINA HORIZONTAL GRID MARKER.
BROKEN LINES REPRESENT PROPERTY LINES WHICH ARE NOT ACTUALLY SURVEYED. THESE DASHED LINES WERE TAKEN FROM DEEDS OR OTHER SOURCES.
THERE IS A TEN FOOT DRAINAGE AND UTILITIES EASEMENT ACROSS THE FRONT, REAR, AND EACH SIDELINE OF EACH LOT.
REFERENCE:
BEING ALL OF LOT 4 - FISHERMANS COVER MINOR SUBDIVISION - AS RECORDED IN PLAT BOOK 71, PAGE 92 - IREDELL COUNTY REGISTRY.
Line Chart
LINE | BEARING | DISTANCE
L1 | N41°58'24"W | 6.11'
L2 | N35°50'06"E | 9.97'
LEGEND:
PKN - PK NAIL
IPF - IRON PIPE FOUND
IRS - IRON REBAR SET
IRF - IRON REBAR FOUND
NTS - NOT TO SCALE
R/W - RIGHT OF WAY
BM - BENCHMARK
BH - SEPTIC TEST PIT
- COMPUTED POINT
- LIGHT POLE
- POWER POLE
W - WELL
- PROPOSED SEPTIC FLAG
ZONING:
SUBJECT PROPERTY IS ZONED: RR - IREDELL COUNTY ZONING JURISDICTION.
IC - IREDELL COUNTY ZONING
PROPERTY IS SUBJECT TO A 35' FRONT (FY), 15' SIDE (SY) 35' REAR YARD (RY) & 50' LAKE BUFFER (LB) - MINIMUM BUILDING SETBACK LINE PER IREDELL COUNTY ZONING ORDINANCE.
I, MATTHEW I. GRANT, CERTIFY THAT THIS PLAT WAS PREPARED UNDER MY SUPERVISION FROM AN ACTUAL FIELD SURVEY OF DESCRIPTION(S) AS RECORDED IN DEED BOOK 2686, PAGE 2229 & PLAT BOOK 71. PAGE 92; THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AS SUCH AND WERE PLOTTED FROM INFORMATION AS REFERENCED HEREON: THAT THE RATIO OF PRECISION AS CALCULATED WAS 1:10,000 AND THAT THE GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS) WAS USED TO PERFORM A PORTION OF THIS SURVEY AND THE FOLLOWING INFORMATION WAS USED:
CLASS OF SURVEY: CLASS A
POSITIONAL ACCURACY: 0.01'
TYPE OF GPS FIELD PROCEDURE: RTK
DATES OF SURVEY: 11-30-20
DATUM/EPOCH: NAD83(2011)
PUBLISHED/FIXED-CONTROL USE: VRS
GEOID MODEL: 20128
COMBINED GRID FACTOR: 0.99986887
UNITS: US SURVEY FEET
I FURTHER CERTIFY THIS IS A SURVEY OF AN EXISTING PARCEL OR PARCELS OF LAND OR ONE OR MORE EXISTING EASEMENTS AND DOES NOT CREATE A NEW STREET OR CHANGE AN EXISTING STREET. THAT THIS PLAT MEETS THE REQUIREMENTS OF THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN NORTH CAROLINA (21 NCAC 56.1600) AND THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED. WITNESS MY HAND AND SEAL THIS 30th DAY OF NOVEMBER, 2020.
PROFESSIONAL LAND SURVEYOR L-5208
MATTHEW I. GRANT
NORTH CAROLINA PROFESSIONAL SEAL L-5208 LAND SURVEYOR MATTHEW I. GRANT
Total Area:
0.706 Acre
30,765.06 sq. ft.
0 30 60 90
JORDAN GRANT
ENGINEERING • SURVEYING • PLANNING
JORDAN GRANT & ASSOCIATES, PLLC
P.O. BOX 151 * STATESVILLE, NC 28687
mattg@jordan-grant.com (704) 928-7919
FIRM # P-1227
SURVEY FOR:
Timothy & Wendie Dunn
DRAWN BY: SMS | CHECKED BY: MIG
SCALE: 1"=30' |
DEED REF: 2686-2229 | PIN NO: 4638-01-2951
DATE OF MAP: 11-30-20 | SURVEY DATE: 11-24-20
REVISION: | DRAWING FILE: 20200133-PHYS
231 HERMANCE LANE - MOORESVILLE, N.C. 28117
DAVIDSON TOWNSHIP --- IREDELL COUNTY --- NORTH CAROLINA

SOIL/SITE EVALUATION

(Continuation Sheet)

Sheet ____ of ____

DEPARTMENT OF ENVIRONMENT
AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL HEALTH

Hermann Lupe

PROPERTY ID #: ____
DATE OF EVALUATION: 1-21-21
COUNTY: Iredell

LICENSED SOIL SCIENTIST STEVEN J. MERLIN 125 STATE OF NORTH CAROLINA

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %		HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941) .1941 STRUCTURE/ TEXTURE	.1941 CONSISTENCE/ MINERALOGY	OTHER PROFILE FACTORS .1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	PROFILE CLASS & LTAR
1	Lss 15-1	AB	0-9	1mgr /L	FR	5YR 3/3	164"			IV 0.3
		Bt	9-24	2msbk /c	FR(SPT)	2.5YR 5/4				
		BC	24-64	1msbk /SL SL	FR	2.5YR 4/6 +pm				II Bc soil 0.4+
2	Lss 14-1		0-14	Fill					14" Fill 44" Rock	IV 0.3
		Bt	14-28	2m ABK /SC	Fi	2.5YR 5/6(10YR 5/8 (com)				
		Bt	28-44	1/2m ABK /SCL	Fi	2.5YR 5/1				
3	Lss 12-1	AB	0-7	1mgr /L	Fri	5YR 3/3	57" /164	SL	-	IV 0.3 shallow 0.4+ Deeper
		Bt	7-34	2msbk /SC	FR(SPT)	5YR 4/6				
		BC	34-57	1msbk /SL	Fri/vfi	5YR 5/1 +m				
		C	57-64	Grave /SL	VFi	pm				
4	Lss 14-1	Ap	0-8	1mgr /SL	Fri	7.5YR 3/2	140"		40" Rock	IV 0.3
		Bw	8-17	1fsbk /SL	FR	7.5YR 4/4				
		Bt	17-40	2msbk /SC	FR(SPT)	5YR 5/1				
		Bt	40"	" +Rock						
5	Lss 10-1	AB	0-9	1mgr /SL	FR	5YR 3/3	58" /164	SL	-	IV 0.3 shallow 0.4+ Deeper
		Bt	9-38	2msbk /SC	FR(SPT)	2.5YR 4/6				
		BC	38-58	1/2msbk /SCL SCL	FR(SPT)	5YR 5/6 +pm				
		C	58-64	Grave /SL	FR	pm				

COMMENTS: ____

Alternative Septic Services, LLC

15 LONE COYOTE RIDGE; FLETCHER, NC 28732
EMAIL: SJMELIN@GMAIL.COM CELL: (828) 551-9903

ON-SITE SOIL AND SITE EVALUATION

231 Hermance Lane
Davidson Township
Session Law Permitting
Iredell County, North Carolina
Parcel ID# 4638-01-2951
3-Bedroom (360 GPD)

Prepared for:

Prepared by:
Alternative Septic Services, LLC
15 Lone Coyote Ridge
Fletcher, NC 28732



Steven J. Melin #1254

Steven J. Melin, LSS

January 24, 2021

Alternative Septic Services, LLC

15 LONE COYOTE RIDGE; FLETCHER, NC 28732
EMAIL: SJMELIN@GMAIL.COM CELL: (828) 551-9903

231 Hermance Lane **01/24/2021**
PIN# 4638-01-2951 (Iredell County, NC (3-BDR))
Saprolite System: No

Onsite Wastewater Septic System Overview:

The following report has been prepared by Alternative Septic Services, LLC (Steve Melin, LSS #1254) for 231 Hermance Lane in Mooresville (Iredell County), North Carolina. A 3-bedroom house is proposed. Please note that the following report prepared is intended to be permitted under Session Law 2018-Section 11.c. **The LSS Evaluation is being submitted pursuant to and meets the requirements of SL 2018-114 Section 11.(c). Additionally, the system will need to be installed prior to any site construction.**

Application Type:	Session Law IP/AC 3-BDR					
Number of Bedrooms:	Proposed Septic System	**GPD**	**Soil Group**	**Soil Texture**	**LTAR**	**Linear Feet Required Calculation (in Square and Linear Feet)**
Initial Septic System:	Prefabricated Permeable Block Panel System (PPBPS)	360	IV	Clay	0.35	360 gpd / 0.35 gpd/ft^2 = 1,029 ft^2 1,029 ft^2/6. ft trench eq. = 171 ft (See calculations below)
Repair Septic System:	Aerobic Drip Irrigation	360	IV	Clay	0.15	360 gpd / 0.15 gpd/ft^2 = 2,400 ft^2 or 1,200 linear feet of drip tubing 2' off center (See calculations below)
Easement Required:	NO					

Alternative Septic Services, LLC

15 LONE COYOTE RIDGE; FLETCHER, NC 28732
EMAIL: SJMELIN@GMAIL.COM CELL: (828) 551-9903

Onsite Wastewater Septic System Configuration and Recommendations:

The following recommendations are proposed by Alternative Septic Services for 231 Hermance Lane in Mooresville (Iredell County), North Carolina. The proposed system design/layout is for a 3-bedroom house (360 gallons per day). The septic area has been evaluated and determined to contain Group IV soils (the most restrictive texture being clay). A long-term acceptance rate (LTAR) of 0.30 has been assigned to these soils *(See attached soil descriptions).*

It is recommended to utilize a PPBPS (T&J Panel Block) type system for the septic drainfield. The (initial) septic system will require 1710 linear feet of material to accommodate the 3-bedroom septic system. The recommended trench depth is 42" (low side of trench). It is anticipated that gravity flow can be maintained to the drainfield. The square and linear footage required for installation of this system is illustrated below.

3 bedrooms x 120 gallon/day/bedroom = 360 gallons per day (gpd)
Group IV, Clay, 0.35 gallons per square foot per day (LTAR)
Square Footage required: 360 gpd / 0.35 LTAR = 1,028 square feet
1,600 ft^2/6.0' trench equivalency= 171 Linear Feet
NOTE: Not a Saprolite System

It is recommended to utilize an aerobic drip irrigation type system for the repair septic drainfield. The repair system will require 1,200 linear feet of material to accommodate the 3-bedroom repair septic system. The recommended drip depth is 16 inches. The square and linear footage required for installation of this system is illustrated below.

3 bedrooms x 120 gallon/day/bedroom = 360 gallons per day (gpd)
Group IV, Clay, 0.30 gallons per square foot per day (0.30 Drip LTAR)
Square Footage required: 360 gpd / 0.30 LTAR = 3,200 square feet or 1,600 linear feet of tubing 2' o/c
NOTE: Not a Saprolite System

15 LONE COYOTE RIDGE; FLETCHER, NC 28732
EMAIL: SJMELIN@GMAIL.COM CELL: (828) 551-9903

The proposed septic system area has been delineated in the field. It is recommended to utilize 6 x 28 linear feet of material for the septic drainfield. The system will need to be installed prior to any site construction. *(See attached site plan for detail.)* It is also recommended to delineate the system again prior to installation.

Onsite Wastewater Septic System Setbacks (Buffers) and Site Recommendations:

The following items are recommended to preserve the integrity of the proposed site and surrounding area.

1. It is recommended to encase all septic system supply lines where they cross roads, drives and/or power lines (*pursuant to Laws and Rules for Sewage Treatment, and Disposal Systems 15A NCAC 18A .1900*)

2. It is recommended to divert stormwater runoff away from all proposed septic areas.

3. A minimum 1,000 gallon septic tank is recommended / required. The septic tank is proposed to feed one-hundred seventy-one feet (171') of drainline by a distribution box with speed levelers (see attached site plan).

4. The system will need to be installed prior to any site

5. Please notify us if there are any changes to the site plan.

6. The proposed septic system designs/layouts are based on dodging large trees or other obstacles that may hinder the installation or operation of the septic system.

7. The proposed onsite wastewater system is based off of theoretical calculations based on data obtained at the site. Actual system performance is not guaranteed.

8. The proposed initial septic system and repair system must maintain a setback (Buffer), specified by North Carolina Department of Environment and Natural Resources (NCDENR), including: 5' horizontal from the house and all foundations, 50' horizontal from any surface water, 100' horizontal minimum from all wells, 10' horizontal from all property lines and water lines, 20' horizontal from any other septic system (except repair) and 15' horizontal from cut banks (unless filled and compacted, 5' horizontal setback)

Alternative Septic Services, LLC

15 Lone Coyote Ridge
Fletcher, NC 28732

231 Hermance Lane 1/24/2021
360 Gallons per Day (3-BDR)
PIN# 4638-01-2951 (Iredell County, NC)
Saprolite System: No

Septic System Calculation Worksheet

Initial System: PPBPS

Recommended Trench Bottom Depth: 42"

Gal / Day	Trench Width (Inches)	Trench Equivalency (Feet)	Soil Depth on 0% Slope
360	24	4	54

Slope	Auger #	Soil Depth (in.)	Total Suitable Pit Depth/ Sap. Depth (in.)	Soil Needed (slope adjusted) (in.)	[1] Total Depth of Saprolite Required (2:1 ratio) factoring Soil Depth (in.)	Fill Material Required (in.)	Morphological Based Field LTAR
15%	1	64	64	57.6	N/A	0	0.4
12%	3	57	64	56.9	N/A	0	0.4
10%	5	58	64	56.4	N/A	0	0.4
					LTAR Utilized		**0.35**
					Linear Feet Required		**257**

Repair System: Aerobic Drip Irrigation

Recommended Drip Tubing Depth: 16"

Gal / Day	Trench Width (Inches)	Trench Equivalency (Feet)	Soil Depth on 0% Slope
360			28

Slope	Pit/Auger#	Soil Depth (in.)	Total Suitable Pit Depth/ Sap. Depth (in.)	Soil Needed (slope adjusted) (in.)	[1] Total Depth of Saprolite Required (2:1 ratio) factoring Soil Depth (in.)	Fill Material Required (in.)	Morphological Based Field LTAR
14%	2	44	44	28.0	N/A	0	0.3
14%	4	40	40	28.0	N/A	0	0.3
					LTAR Utilized		**0.15**
					Linear Feet Required		**1200**

[1] [(soil depth needed-soil depth) x 2] + Soil depth = sap. Depth needed.
Above equation only to be used if the difference in soil depth needed and actual soil depth present = 12" or less

Alternative Septic Services, LLC

15 Lone Coyote Ridge; Fletcher, NC 28732
Email: sjmelin@gmail.com Cell: (828) 551-9903

January 24, 2021

To: Owner – 231 Hermance Lane

Re: **Site/Soil Investigation(s) for 231 Hermance Lane – Mooresville (Iredell County), North Carolina).**

I, _____, acknowledge that "The LSS Evaluation attached is this application is to be used to produce, design and construction features for permitting in accordance with SL 2018-114 Section 11.(c)."

Sincerely,

Steve Melin, LSS
Soil Scientist
Alternative Septic Services, LLC

Client:

Accepted: _____

Date: _____

Alternative Septic Services, LLC

15 Lone Coyote Ridge
Fletcher, NC 28732

231 Hermance Lane 1/24/2021
360 Gallons per Day (3-BDR)
PIN# 4638-01-2951 (Iredell County, NC)
Saprolite System: No

Septic System Calculation Worksheet

Initial System: PPBPS

Recommended Trench Bottom Depth: 42"

Gal / Day	Trench Width (Inches)	Trench Equivalency (Feet)	Soil Depth on 0% Slope
360	24	4	54

Slope	Auger #	Soil Depth (in.)	Total Suitable Pit Depth/ Sap. Depth (in.)	Soil Needed (slope adjusted) (in.)	[1] Total Depth of Saprolite Required (2:1 ratio) factoring Soil Depth (in.)	Fill Material Required (in.)	Morphological Based Field LTAR
15%	1	64	64	57.6	N/A	0	0.4
12%	3	57	64	56.9	N/A	0	0.4
10%	5	58	64	56.4	N/A	0	0.4
						LTAR Utilized	**0.35**
						Linear Feet Required	**257**

Repair System: Aerobic Drip Irrigation

Recommended Drip Tubing Depth: 16"

Gal / Day	Trench Width (Inches)	Trench Equivalency (Feet)	Soil Depth on 0% Slope
360			28

Slope	Pit/Auger#	Soil Depth (in.)	Total Suitable Pit Depth/ Sap. Depth (in.)	Soil Needed (slope adjusted) (in.)	[1] Total Depth of Saprolite Required (2:1 ratio) factoring Soil Depth (in.)	Fill Material Required (in.)	Morphological Based Field LTAR
14%	2	44	44	28.0	N/A	0	0.3
14%	4	40	40	28.0	N/A	0	0.3
						LTAR Utilized	**0.15**
						Linear Feet Required	**1200**

[1] [(soil depth needed-soil depth) x 2] + Soil depth = sap. Depth needed.
Above equation only to be used if the difference in soil depth needed and actual soil depth present = 12" or less

Barbara Nebel

From: Wendie Dunn <wendiedunn@gmail.com>
Sent: Tuesday, January 26, 2021 8:54 AM
To: Barbara Nebel
Subject: Fwd: Soils Report - 231 Hermance Lane (Wendie Dunn) - wendiedunn@gmail.com - Gmail

https://mail.google.com/mail/u/0/

Fwd: Soils Report - 231 Hermance Lane (Wendie Dunn)

Page 1 of 1

15 Lone Coyote Ridge

Fletcher, NC 28732

231 Hermance Lane 1/24/2021

360 Gallons per Day (3-BDR)

PIN# 4638-01-2951 (Iredell County, NC)

Saprolite System: No

Septic System Calculation Worksheet

Initial System: PPBPS

Recommended Trench Bottom Depth: 42"

Gal / Day

Trench

Width

(Inches)

Trench

Equivalency

(Feet)

Soil Depth on

0% Slope

360 24 4 54

Slope Auger # Soil Depth (in.)

Total Suitable

Pit Depth/ Sap.

Depth (in.)

Soil Needed

(slope adjusted)

(in.)

1

Total Depth of

Saprolite Required

(2:1 ratio) factoring

Soil Depth (in.)

Fill Material

Required (in.)

Morphological

Based Field

LTAR

15% 1 64 64 57.6 N/A 0 0.4

12% 3 57 64 56.9 N/A 0 0.4

10% 5 58 64 56.4 N/A 0 0.4

0.35

257

Repair System: Aerobic Drip Irrigation

Recommended Drip Tubing Depth: 16"

Gal / Day

Trench

Width

(Inches)

Trench

Equivalency

(Feet)

Soil Depth on

0% Slope

360 28

Slope Pit/Auger# Soil Depth (in.)

Total Suitable

Pit Depth/ Sap.

Depth (in.)

Soil Needed

(slope adjusted)

(in.)

1

Total Depth of

Saprolite Required

(2:1 ratio) factoring

Soil Depth (in.)

Fill Material

Required (in.)

Morphological

Based Field

LTAR

14% 2 44 44 28.0 N/A 0 0.3

14% 4 40 40 28.0 N/A 0 0.3

0.15

1200

1 [(soil depth needed-soil depth) x 2] + Soil depth = sap. Depth needed.

Above equation only to be used if the difference in soil depth needed and actual soil depth present = 12" or less

Linear Feet Required

LTAR Utilized

LTAR Utilized

Linear Feet Required



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Alternative Septic Services, LLC

15 LONE COYOTE RIDGE; FLETCHER, NC 28732
EMAIL: SJMELIN@GMAIL.COM CELL: (828) 551-9903

ON-SITE SOIL AND SITE EVALUATION

231 Hermance Lane
Davidson Township
Session Law Permitting
Iredell County, North Carolina
Parcel ID# 4638-01-2951
3-Bedroom (360 GPD)

Prepared for:

Prepared by:
Alternative Septic Services, LLC
15 Lone Coyote Ridge
Fletcher, NC 28732



Steven J. Melin #1254

Steven J. Melin, LSS

January 24, 2021

Alternative Septic Services, LLC

15 LONE COYOTE RIDGE; FLETCHER, NC 28732
EMAIL: SJMELIN@GMAIL.COM CELL: (828) 551-9903

231 Hermance Lane **01/24/2021**
PIN# 4638-01-2951 (Iredell County, NC (3-BDR))
Saprolite System: No

Onsite Wastewater Septic System Overview:

The following report has been prepared by Alternative Septic Services, LLC (Steve Melin, LSS #1254) for 231 Hermance Lane in Mooresville (Iredell County), North Carolina. A 3-bedroom house is proposed. Please note that the following report prepared is intended to be permitted under Session Law 2018-Section 11.c. **The LSS Evaluation is being submitted pursuant to and meets the requirements of SL 2018-114 Section 11.(c). Additionally, the system will need to be installed prior to any site construction.**

Application Type:	Session Law IP/AC 3-BDR					
Number of Bedrooms:	Proposed Septic System	**GPD**	**Soil Group**	**Soil Texture**	**LTAR**	**Linear Feet Required Calculation (in Square and Linear Feet)**
Initial Septic System:	Prefabricated Permeable Block Panel System (PPBPS)	360	IV	Clay	0.35	360 gpd / 0.35 gpd/ft^2 = 1,029 ft^2 1,029 ft^2/6. ft trench eq. = 171 ft (See calculations below)
Repair Septic System:	Aerobic Drip Irrigation	360	IV	Clay	0.15	360 gpd / 0.15 gpd/ft^2 = 2,400 ft^2 or 1,200 linear feet of drip tubing 2' off center (See calculations below)
Easement Required:	NO					

Alternative Septic Services, LLC

15 LONE COYOTE RIDGE; FLETCHER, NC 28732
EMAIL: SJMELIN@GMAIL.COM CELL: (828) 551-9903

Onsite Wastewater Septic System Configuration and Recommendations:

The following recommendations are proposed by Alternative Septic Services for 231 Hermance Lane in Mooresville (Iredell County), North Carolina. The proposed system design/layout is for a 3-bedroom house (360 gallons per day). The septic area has been evaluated and determined to contain Group IV soils (the most restrictive texture being clay). A long-term acceptance rate (LTAR) of 0.30 has been assigned to these soils *(See attached soil descriptions).*

It is recommended to utilize a PPBPS (T&J Panel Block) type system for the septic drainfield. The (initial) septic system will require 1710 linear feet of material to accommodate the 3-bedroom septic system. The recommended trench depth is 42" (low side of trench). It is anticipated that gravity flow can be maintained to the drainfield. The square and linear footage required for installation of this system is illustrated below.

3 bedrooms x 120 gallon/day/bedroom = 360 gallons per day (gpd)
Group IV, Clay, 0.35 gallons per square foot per day (LTAR)
Square Footage required: 360 gpd / 0.35 LTAR = 1,028 square feet
1,600 ft^2/6.0' trench equivalency= 171 Linear Feet
NOTE: Not a Saprolite System

It is recommended to utilize an aerobic drip irrigation type system for the repair septic drainfield. The repair system will require 1,200 linear feet of material to accommodate the 3-bedroom repair septic system. The recommended drip depth is 16 inches. The square and linear footage required for installation of this system is illustrated below.

3 bedrooms x 120 gallon/day/bedroom = 360 gallons per day (gpd)
Group IV, Clay, 0.30 gallons per square foot per day (0.30 Drip LTAR)
Square Footage required: 360 gpd / 0.30 LTAR = 3,200 square feet or 1,600 linear feet of tubing 2' o/c
NOTE: Not a Saprolite System

Alternative Septic Services, LLC

15 LONE COYOTE RIDGE; FLETCHER, NC 28732
EMAIL: SJMELIN@GMAIL.COM CELL: (828) 551-9903

The proposed septic system area has been delineated in the field. It is recommended to utilize 6 x 28 linear feet of material for the septic drainfield. The system will need to be installed prior to any site construction. *(See attached site plan for detail.)* It is also recommended to delineate the system again prior to installation.

Onsite Wastewater Septic System Setbacks (Buffers) and Site Recommendations:

The following items are recommended to preserve the integrity of the proposed site and surrounding area.

1. It is recommended to encase all septic system supply lines where they cross roads, drives and/or power lines (*pursuant to Laws and Rules for Sewage Treatment, and Disposal Systems 15A NCAC 18A .1900*)

2. It is recommended to divert stormwater runoff away from all proposed septic areas.

3. A minimum 1,000 gallon septic tank is recommended / required. The septic tank is proposed to feed one-hundred seventy-one feet (171') of drainline by a distribution box with speed levelers (see attached site plan).

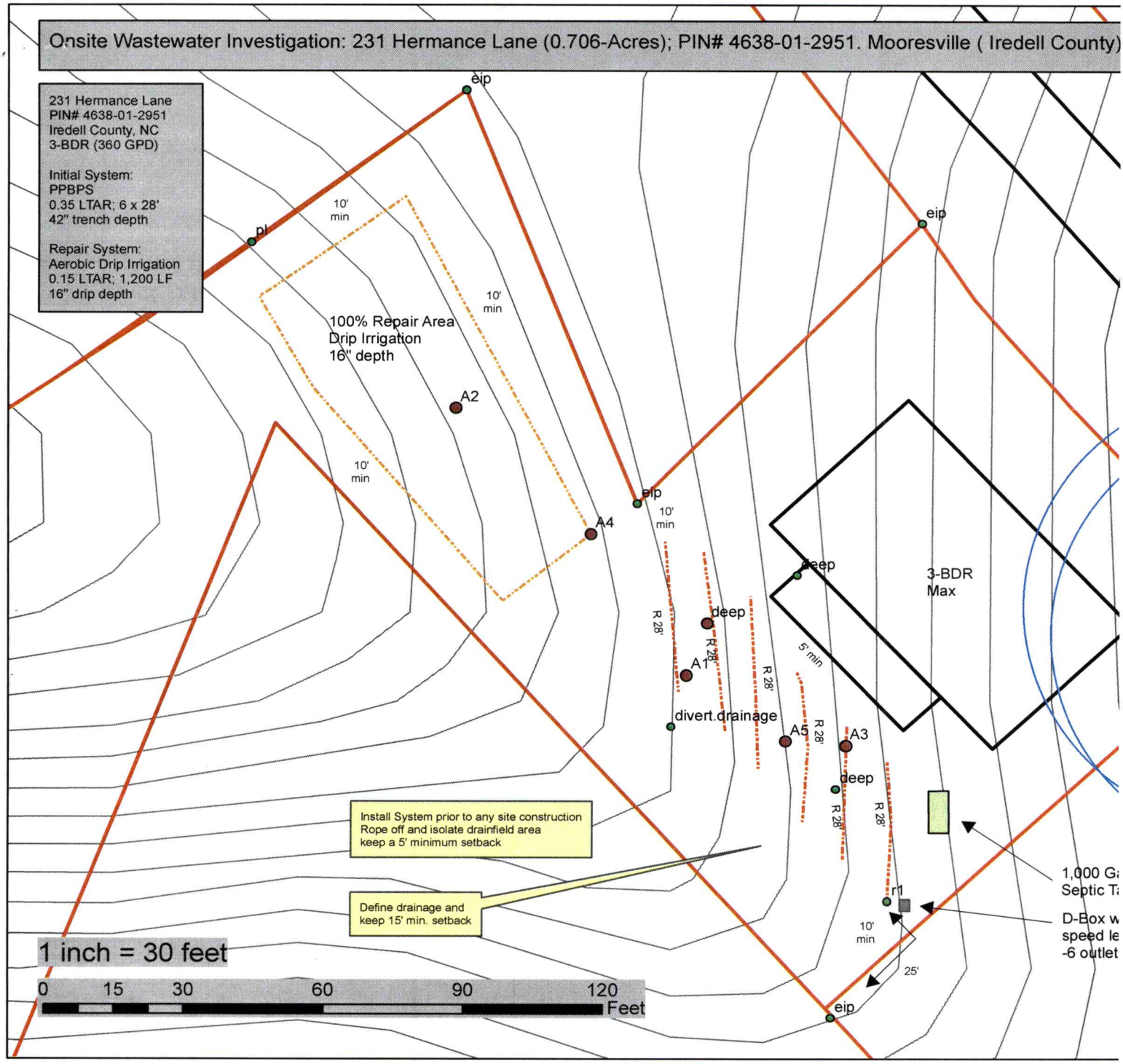
4. The system will need to be installed prior to any site

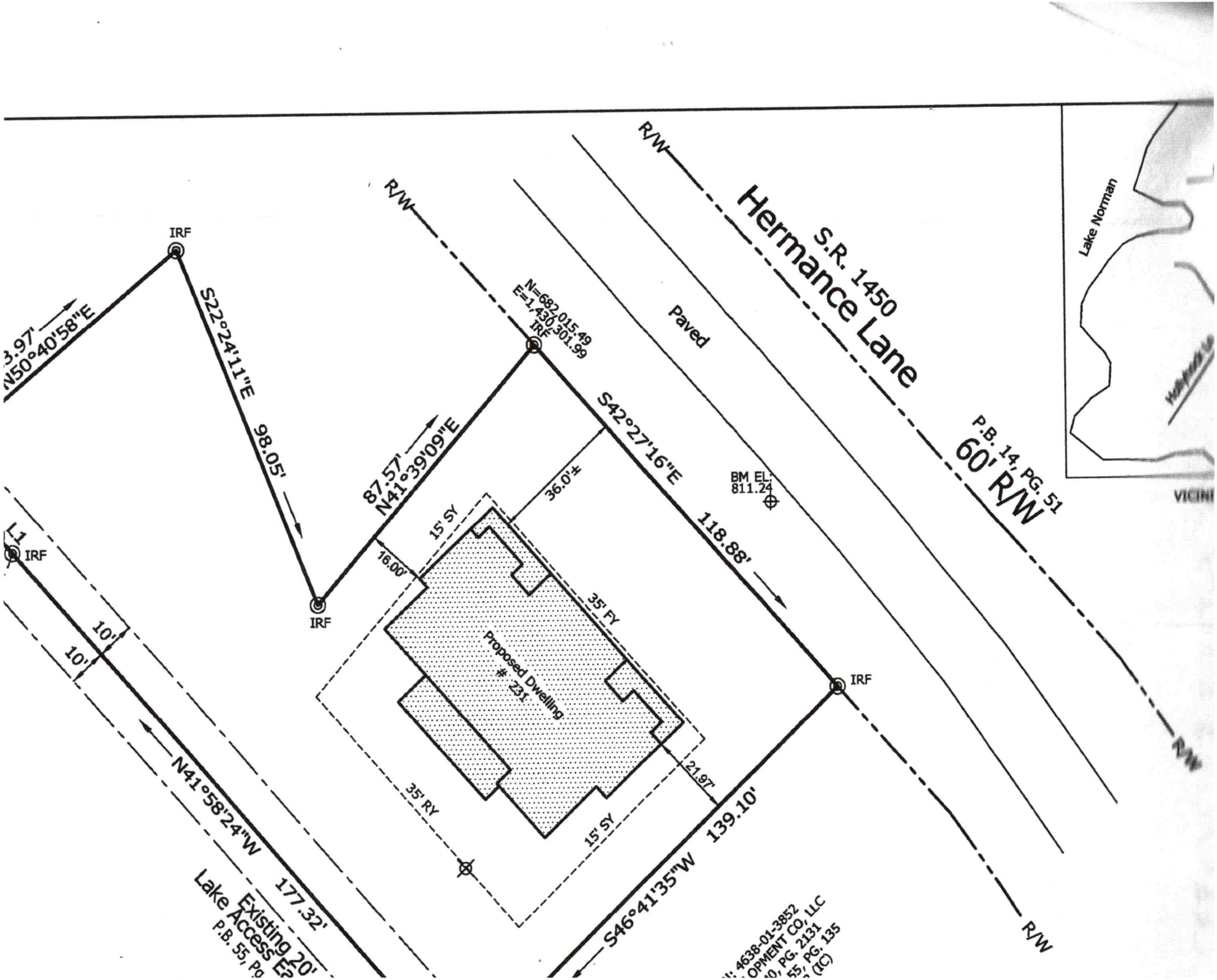
5. Please notify us if there are any changes to the site plan.

6. The proposed septic system designs/layouts are based on dodging large trees or other obstacles that may hinder the installation or operation of the septic system.

7. The proposed onsite wastewater system is based off of theoretical calculations based on data obtained at the site. Actual system performance is not guaranteed.

8. The proposed initial septic system and repair system must maintain a setback (Buffer), specified by North Carolina Department of Environment and Natural Resources (NCDENR), including: 5' horizontal from the house and all foundations, 50' horizontal from any surface water, 100' horizontal minimum from all wells, 10' horizontal from all property lines and water lines, 20' horizontal from any other septic system (except repair) and 15' horizontal from cut banks (unless filled and compacted, 5' horizontal setback)


Onsite Wastewater Investigation: 231 Hermance Lane (0.706-Acres); PIN# 4638-01-2951. Mooresville (Iredell County)
231 Hermance Lane
PIN# 4638-01-2951
Iredell County, NC
3-BDR (360 GPD)
Initial System:
PPBPS
0.35 LTAR; 6 x 28'
42" trench depth
Repair System:
Aerobic Drip Irrigation
0.15 LTAR; 1,200 LF
16" drip depth
eip
pl
10' min
100% Repair Area
Drip Irrigation
16" depth
A2
A4
A1
A3
A5
deep
3-BDR
Max
R 28'
5' min
divert.drainage
Install System prior to any site construction
Rope off and isolate drainfield area
keep a 5' minimum setback
Define drainage and
keep 15' min. setback
r1
25'
1 inch = 30 feet
0 15 30 60 90 120
Feet


R/W
S.R. 1450
Hermance Lane
P.B. 14, PG. 51
60' R/W
Lake Norman
Paved
IRF
N=682,015.49
E=1,430,301.99
IRF
S22°24'11"E 98.05'
87.57'
N41°39'09"E
S42°27'16"E 118.88'
BM EL.
811.24
36.0'±
15' SY
16.00'
35' FY
Proposed Dwelling
231
21.97'
35' RY
15' SY
139.10'
S46°41'35"W
IRF
IRF
10'
10'
N41°58'24"W 177.32'
Existing 20'
Lake Access Ea
P.B. 55, Pg
R/W
R/W
4638-01-3852
OPMENT CO, LLC
9, PG. 2131
55, PG. 135
(IC)

RECEIVED FEB 01 2020

APPLICATION MUST BE FILLED OUT COMPLETELY & BE LEGIBLE OR IT WILL NOT BE PROCESSED

S.L.

Iredell County Health Department – Environmental Health Division

PAGE 1: *APPLICATION FORM*

AP-312247 $500.00

Application For: 500 (X) New Well Permit 550 ( ) Well Repair Permit ( ) Well Abandonment
(X) Septic Improvement Permit (X) Authorization to Construct ( ) Existing System Inspection ( ) Septic System Repair

THE ABOVE PERMIT DOCUMENTS WILL BECOME INVALID IF INFORMATION PROVIDED ON THIS APPLICATION IS FALSIFIED OR CHANGED, OR IF THE SITE IS ALTERED. THE IMPROVEMENT PERMIT IS VALID FOR EITHER 60 MONTHS OR WITHOUT EXPIRATION DEPENDING UPON DOCUMENTATION SUBMITTED. APPLICATION WITH SITE PLAN 60 MONTHS, APPLICATION WITH COMPLETE, SCALED PLAT WITHOUT EXPIRATION. SEE 15A NCAC 18A .1937(f) FOR DETAILS.

Page 2: *Site Plan Worksheet* form MUST accompany this application

The following optional attachments may also be submitted: ( ) Survey Plat, scaled no more than 1 inch = 60 feet
Place an (X) beside whichever is submitted if applicable ( ) Custom Site Plan, scaled no more than 1 inch = 60 feet

Applicant Information: (PRINT CLEARLY)

Applicant Name: Todd & Wendie Dunn Address: 18028 Delmas dr Cornelius Zip: 28031
Applicant Email: Wendiedunna2gmail.c Phone: 801-608-3384 Alt. Phone: same
Owner Name: Todd & Wendie Dunn Address: 18028 Delmas dr Cornelius Zip: 28031
Owner Email: Wendiedunna2gmail.com Phone: 801-608-3384 Alt. Phone: Same

Property Information:

Street Address: Lot #4 231 Hermance LN
Subdivision Name: Fisherman's Cove Section/Phase: _____ Lot Number: #4
Driving Directions: HWY 150 to Waddle ROad take quick 1st Right onto Hermance lane .25 miles on left side

Site Development Information: *(check or complete ALL that apply*

(X) New Single Family Residence Maximum Number of Bedrooms: 3
( ) New Multi-Family Residence Maximum Number of Occupants: 8
( ) Accessory Building ( ) Swimming Pool
( ) Bedroom(s) Addition ( ) Other Addition/Structure: _____
( ) Repair to failing septic system ___ Tank ___ Drain lines Describe Problem: _____

CHECK FOUNDATION TYPE
( ) Crawl Space Foundation
( ) Concrete Slab Foundation
(X) Basement with Plumbing
( ) Basement without Plumbing

Non-Residential Site Development: Type of Business: _____
Square Footage of Building: _____ Max. Number of Employees: _____ Max. Number of Seats/Beds/Other: _____

Water Supply: ( ) Replacement Well – Reason: _____
( ) Multi-connection Well Number of Houses: 1 Number of Persons: 4
(X) New Well ( ) Existing Well ( ) Community Well ( ) City Water ( ) Other Public Water

Desired Septic System Type: *(you may rank in order of preference)* Year existing system installed: _____
(1) No Preference (2) Alternative (3) Conventional (4) Innovative (4) Modified Conventional ( ) Other: _____

Please answer the following to the best of your ability:
( ) Yes (X) No Does the site contain any jurisdictional wetlands?
( ) Yes (X) No Is any non-domestic sewage (i.e. industrial) to be generated?
( ) Yes (X) No Is the site subject to approval by any other public agency?

I have read this application and certify that the information provided herein is true, complete, and correct. Authorized county and state officials are granted right of entry to conduct necessary inspections to determine compliance with applicable laws and rules. I understand that I am solely responsible for the proper identification and labeling of all property lines and corners and making the site accessible so that a complete site evaluation can be performed.

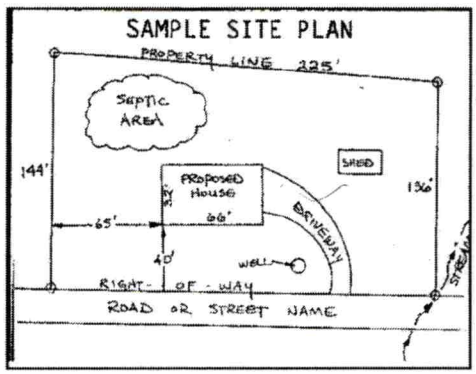
Signature: Wendie Dunn 11/13/2020
Property owner or owner's legal representative signature (SIGNATURE REQUIRED) DATE

IREDELL COUNTY HEALTH DEPARTMENT

ENVIRONMENTAL HEALTH DIVISION

PAGE 2: *SITE PLAN WORKSHEET*

SEE THE "SAMPLE SITE PLAN" BELOW. *INCOMPLETE SITE PLANS WILL BE RETURNED TO YOU FOR COMPLETION AND MAY RESULT IN A DELAY IN THE ISSUANCE OF YOUR SEPTIC SYSTEM PERMIT!!!*



Place an (X) beside each item as you complete the site plan:

- ( ) **Property Line measurements are clearly identified**
- ( ) **All proposed structures are indicated**
- ( ) **Front and side setbacks from property line**
- ( ) **Preferred driveway location and well location**
- ( ) **Area you prefer your septic system to be placed**
- ( ) **North arrow, or other sufficient indicator of direction**

Circle N/A on the following if appropriate:

Location of septic systems and wells within 100' of your property	**N/A**
Location of easements and rights of ways on your property	**N/A**
Location of any designated wetlands on the property	**N/A**

USE THIS SPACE TO DRAW YOUR SITE PLAN

Show: proposed house or business footprint, wells, water lines, patios, pools and decks, and any other item that will occupy space on the site

See Attached

Signature: _____

Property owner or owner's legal representative signature (SIGNATURE REQUIRED)

11/18/2020

DATE

IREDELL COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH

DOCUMENTATION TO AUTHORIZE AN OWNER'S LEGAL REPRESENTATIVE

(Check and sign only ONE of the options below)

☑ **1. * APPLICANT AND OWNER ARE THE SAME. *** (*Sign here*) Wendie Dunn

Applications for permits require the "signature of the owner or owner's legal representative" (15A NCAC 18A .1937). If the owner does not sign the application himself or herself, they can submit any one of the following documents to designate their legal representative: *Power of Attorney; Real Estate Contract; Estate executor; Bankruptcy trustee; Court ordered guardianship* In the absence of the above documentation, the property owner may provide the local health department with documentation that designates a legal representative. A property owner may:
Complete this form to document his or her legal representative, or provide his or her own form that contains the information in this form. If there are multiple property owners, then all property owners must sign the form that designates a legal representative.
By signing a form that designates a legal representative for purposes of 15A NCAC 18A .1937, the property owner authorizes that representative to act on their behalf in matters pertaining to the application and permitting process, including signing or receiving any application, document or permit. The owner retains full responsibility to meet all permit conditions specified by the local health department.

☐ **2.** I, Wendie Dunn, am the legal owner(s) of the property located at Lot #4 Fisherman Cove, identified as

PIN (Parcel Identification Number)_____, located in Iredell County, North Carolina.

I do hereby authorize (**print legal representative/company name**) _____, _____, to act as an agent on my behalf in applying for/signing/obtaining any of the documents described below.

- Application for Improvement Permit (IP) / Authorization to Construct (AC)
- Improvement Permit (IP) / Authorization to Construct (AC)
- Application for soil-site evaluation (new/repair)
- Application/permit for private drinking water well/well abandonment
- Application for Compliance Inspection

I agree to abide by all decisions and/or conditions between the legal representative acting on my behalf and the Iredell County Department of Public Health, Environmental Health Division.

Wendie Dunn
Signature of Owner(s)

11/13/2020
Date

Mooresville - Environmental Health
Fax: 704-662-3239
610 E. Center Avenue, Mooresville, NC 28115

Statesville - Environmental Health
ronda.hart@co.iredell.nc.us
Fax: 704-871-3483
349 N. Center Street, Statesville, NC 28677

• ENVIRONMENTAL HEALTH REQUIREMENTS for SEPTIC and WELL PERMITS

The following items must be completed *PRIOR* to the *SUBMITTAL* of any Environmental Health Application. Incomplete applications will be returned to the applicant and cannot be processed or placed on the work list.

** *Initial all lines below to indicate you have submitted each form and completed every site requirement* **

_____ **Complete all Environmental Health forms**:

_____ Application
_____ Site Plan including the dimensions of proposed structure, addition, pool etc.
_____ Documentation to Authorize Owner Agent (even if the property owner is the applicant – complete section 1 or 2)
_____ Copy of Zoning Permit when applicable
_____ Sign this sheet after you have completed all items

✓ **Lot must be cleared of heavy undergrowth**. In order to evaluate the lot, the footprint of the proposed structure must be visible. Adequate area for the septic drain field and repair area must be sufficiently cleared of heavy undergrowth, with 50 feet of visibility in all directions. Inspectors must be able to evaluate the property, shoot laser level elevations, layout the drain field, do soils work, etc. **If the lot is not cleared sufficiently, then a $100 site revisit fee will be charged and the evaluation will be put on HOLD until the requirement is met.**

✓ **Clearly mark all property corners by locating existing iron or concrete markers.** Flag all property lines every 25 feet if adjacent corners are not visible when standing on any given corner. Property lines must be flagged by a licensed NC surveyor & easily identified **prior to application submittal** (exception may apply for septic repair evaluations only). 'Mow lines' and/or fence lines do NOT constitute marked lines. **If the property lines are not properly marked when the lot is ready to be evaluated, then the application will be put on HOLD and a $100 site re-visit fee charged**.

✓ **Stake or flag the footprint of the proposed structure, addition, pool etc. to match the site plan submitted**. The proposed structure, etc. must be staked out on the property as per the site plan.

✓ **If an Authorization to Construct (AC) is desired,** submit a recorded copy of the plat for newly created or subdivided lot(s) and a LEGIBLE copy of the basic floor plan no larger than 8 ½" x 14" for each floor of the structure including decks, porches, etc. **The overall dimensions must be clearly noted & the rooms labeled.**

Any site not meeting the above requirements when staff arrives for the evaluation will result in a $100 site revisit fee being charged and the request being placed on HOLD. This will delay the processing of the application. *Once work by Environmental Health staff begins, the up-front fees paid toward securing any health department permit are nonrefundable. Refunds for work not started, due to a customer changing their mind or plans, are subject to an administrative fee of $50 to defray a portion of the costs of processing the refund.*

Backhoe pits are required for all applications that require a soils evaluation.
DO NOT DIG PITS UNTIL THE EH SPECIALIST HAS AUTHORIZED AND SCHEDULED YOUR EVALUATION TIME.

- **All utilities shall be marked before pits are dug. Call NC 811 for this service.**
- The applicant/agent is responsible for securing these services
- Backhoe pits are to be dug at the locations and depths determined by the Environmental Health Specialist or a NC Licensed Soil Scientist. A minimum of four pits must be dug.
- The EH specialist will contact you when your application is ready to be processed for pit scheduling.
- Your backhoe operator must be on site during the EH Specialist's evaluation to prevent your operator from having to return to the property for additional work.

By signing below, I am acknowledging the above specifications have been met and the site is READY to be evaluated AND I understand the backhoe pit requirement and will secure those services (if applicable).

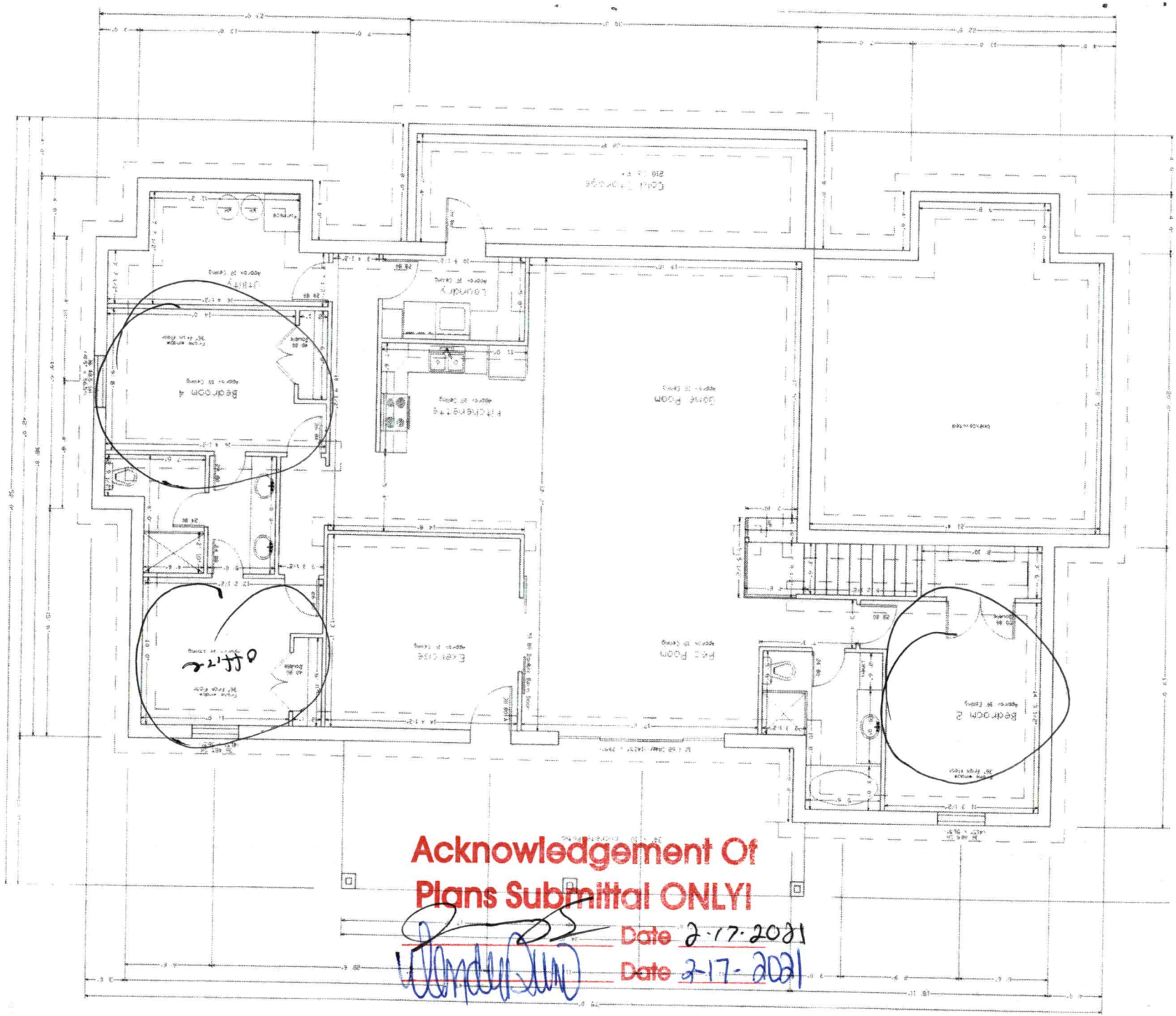
Signature _____ **Date**_____

Questions? Contact the Environmental Health Offices below:

Statesville Office
349 North Center Street (2nd Floor Building Standards)
Statesville, NC 28677-4063
Phone: (704)878-5305 ext. 3456

Mooresville Office
610 East Center Avenue (2nd Floor Govt. Center South)
Mooresville, NC 28115-2548
Phone: (704)660-3625

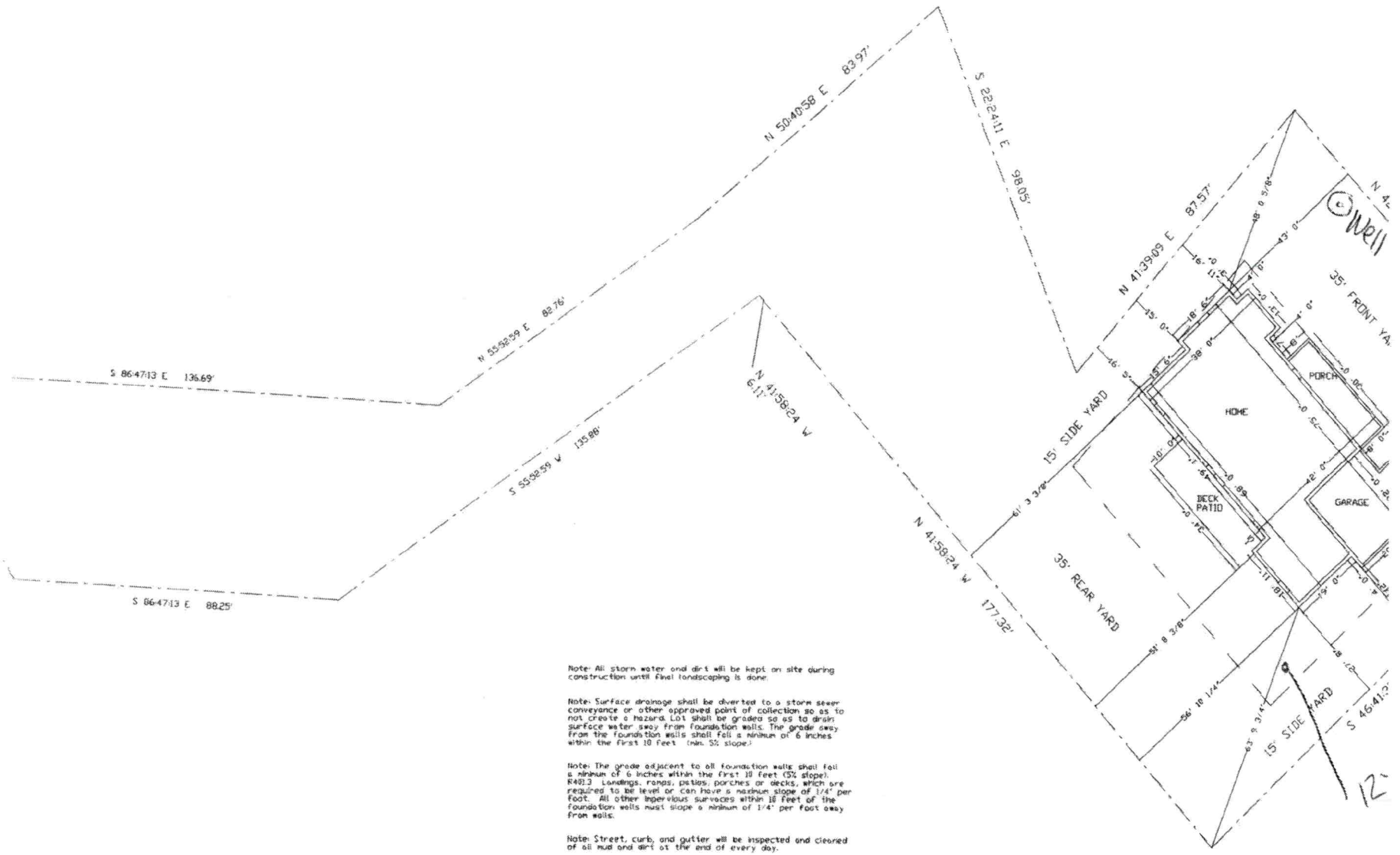
Garage
Master Suite
Master Bath
Closet
Bench w/ Storage
Laundry
Closet
Closet
Closet



Acknowledgement Of
Plans Submittal ONLY!

Date 2-17-2021

Date 2-17-2021



Note: All storm water and dirt will be kept on site during construction until final landscaping is done.

Note: Surface drainage shall be diverted to a storm sewer conveyance or other approved point of collection so as to not create a hazard. Lots shall be graded so as to drain surface water away from foundation walls. The grade away from the foundation walls shall fall a minimum of 6 inches within the first 10 feet (min. 5% slope.)

Note: The grade adjacent to all foundation walls shall fall a minimum of 6 inches within the first 10 feet (5% slope). R401.3 Landings, ramps, patios, porches or decks, which are required to be level or can have a maximum slope of 1/4" per foot. All other impervious surfaces within 10 feet of the foundation walls must slope a minimum of 1/4" per foot away from walls.

Note: Street, curb, and gutter will be inspected and cleaned of all mud and dirt at the end of every day.

Note: Gravel bags (or equivalent BMP) to be placed and maintained around any storm drain inlet adjacent to or immediately downstream from site during construction.

Note: Berms or swales may be required along property lines to prevent storm water flow onto adjacent lots. Final grading shall blend with adjacent lots.

Note: A lined concrete washout area must be provided at the site for all concrete, paint, stucco, or masonry work. Washout on the ground is prohibited.